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MAGAZINE

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CARNEGIE
INSTITUTE OF TECHNOLOGY

CARNEGIE LI BRARY

VOLUME XV PITTSBURGH, PA., NOVEMBER 1941 NUMBER 6



ENTRANCE TO CARNEGIE MUSIC HALL

The World's Most Beautiful Foyer



THE CARNEGIE MAGAZINE

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VOLUME XV

Number 6

NOVEMBER 1941

The world is grown so bad, That wrens make prey where eagles dare not perch.

-RICHARD III

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MARSHALL BIDWELL, Organist

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The Carnegie Institute will be the final home of every worthy collection of pictures and museum objects when the men and women who have chosen them wish to have the world enjoy them.

-Andrew Carnegie

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FORTY-FOURTH FOUNDER'S DAY

WESTINGHOUSE E. & M. Co. Sharon, PA.

DEAR CARNEGIE:

My wife and I wish to express our thanks for the opportunity to attend the forty-fourth Founder's Day, Thursday evening, October 23, in the Carnegie Music Hall. It gave us an opportunity to greet our Ambassador, Dr. Hu Shih, personally and hear him speak to the audience on "China's Power of Resistance."

I was once a student of the Peiping University when Dr. Hu was the Chancellor.

Everything went off just fine last Thursday evening. The stage was beautifully decorated. Every seat in the Hall was occupied. The music was superb, and the speaker excellent. The flags of different nations with the Star-Spangled Banner leading on the right and the Chinese National Flag at the rear symbolize two democracies fighting Hitlerism and other aggressor nations from beginning to end until final victory is obtained. The audience sensed that and applauded when the different flags were identified from the platform. Thank you again for a most enjoyable evening.

—JOHN H. Tsur

[Design Engineer, Distribution

Transformer Division]

CONGRATULATIONS FROM AN EDITOR

DEAR CARNEGIE:

After seeing your Carnegue Magazine for October, with its first prize in colors, as one editor to another, I wish to express my admiration for a workmanlike job; both from the technical and editorial standpoints. I particularly wish to congratulate everybody who had anything to do with the reproduction of "American Pieta." Not even the high-grade magazines of Philadelphia and New York can do better work.

—BERNHARD RAGNER [Editor, Greater Pittsburgh] Ins

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WHO SAID IT?

"Everybody talks about the weather, but nobody does anything about it."

Perhaps, if the question of the authorship of this remark were submitted to any convention of intelligent Americans, ninety-nine per cent of them would answer, "Mark Twain." And, perhaps, the four well-informed gentlemen of "Information, Please," and all the Quiz Kids would make the same answer.

But it was not Mark Twain; it was Charles Dudley Warner, who, in an editorial in the Hartford Courant in 1890, gave utterance through his pen to the whimsical comment.

THE TEMPERATE LIFE

Temperance and thrift are virtues which act and react upon each other, strengthening both, and are seldom found apart.

-ANDREW CARNEGIE



THE CARNEGIE INSTITUTE AND THE CARNEGIE LIBRARY OF PITTSBURGH
WITH THE CARNEGIE INSTITUTE OF TECHNOLOGY IN THE DISTANCE

FOUNDER'S DAY 1941

The forty-fourth annual celebration of Founder's Day at the Carnegie Institute was held in the Music Hall on Thursday evening, October 23, 1941, at eight oclock, before an audience that filled the house.

The occasion marked an enthusiastic tribute to the memory of Andrew Carnegie and to the wonder-world of his gifts to the people of Pittsburgh.

There were plants and flowers in abundance, and a long row of the flags of all the nations which had in the past years sent their pictures to the international Exhibition of Paintings—with only two exceptions: Germany and Italy were not there.

On the platform were the trustees of the Carnegie Institute and the directors of the various departments; and besides—in view of the fact that the speaker of the evening was to be the Chinese Ambassador to the United States—there was a group of Chinese men, all of whom were graduates of the University of Pittsburgh, or of other American colleges, with more than a hundred

other Chinese in the auditorium seats, who were emotionally stirred by the presence of their distinguished compatriot and by the beautiful banner of their country.

Upon the entrance of the platform group, the entire audience arose and joined in singing "The Star-Spangled Banner." The program was then immediately begun, as follows:

THE PRESIDENT: Ladies and Gentlemen: This is the forty-fourth time that we have celebrated Founder's Day in this beautiful hall. Mr. and Mrs. Carnegie were present at the first celebration forty-three years ago, which was a very small and informal affair, held in one of the offices in this building; and they attended on later occasions, when, with the encouragement of Mr. Carnegie's unfailing and frequent gifts, the general progress of the Carnegie Institute, the Carnegie Institute of Technology, and the Carnegie Library had taken on an international importance. In past years—and I fear that I repeat

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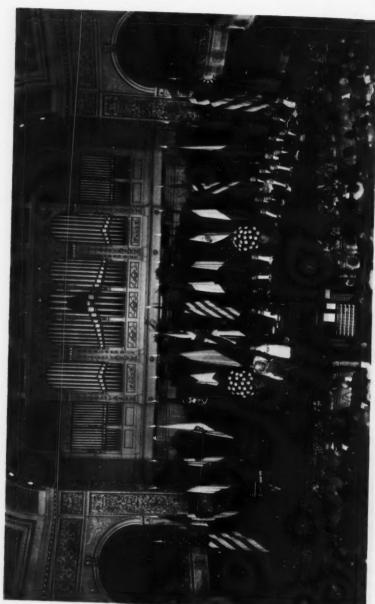
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this gratifying fact to you too frequently-but it is a pleasant thing to say, and, I hope, a pleasant thing for you to remember-these assemblies of our friends have taken on an illustrious character by the participation of five Presidents of the United States-Messrs. Cleveland, McKinley, Taft, Wilson, and Coolidge-one President of the French Republic-Paul Doumer-and many others famous as ambassadors, explorers, authors, painters, sculptors, poets, and labor leaders. And I cannot resist the statement that Winston Churchill also has spoken from this platform, although on another occasion, when I had the honor of introducing him to his audience. Tonight we preserve this inspiring tradition—in John Milton's phrase, we are keeping our standard full-high advanced.

The inspiring "Marche Slave," composed by Tchaikovsky, was then played by Dr. Marshall Bidwell, Organist and Director of Music.

THE PRESIDENT: We have always asked the listening ear of our Heavenly Father upon these meetings-more than ever do we need His mercies now. The invocation will be pronounced by the Reverend Dr. Arthur B. Kinsolving 2nd, Rector of Calvary Protestant Episcopal Church.

Dr. Kinsolving: Almighty and merciful God, we humbly invoke Thy blessing upon these exercises.

Guide the widespread destiny of the Carnegie Institute—the ever lengthening shadow of him whose name it bears. Through its influence may goodness,

beauty, and truth continue to be revealed to man.

And, O God, in these war-torn days of crisis, tragedy, and bewilderment, may we rededicate ourselves, that righteousness may exalt our nation, beauty clothe our holiness, and Thy truth keep mankind forever free.

We ask in the name of Jesus, The

Prince of Peace. Amen.

Miss Alice Long, soprano at the Shadyside Presbyterian Church, then sang Mimi's song from "La Boheme,"
"Si, Mi Chiamo Mimi"; and "Riflessi"
by Santoliquide; with piano accompaniments played by Mrs. Ruth Perry Topping—a performance that was greatly enjoyed and acclaimed.

THE PRESIDENT: The Chinese national anthem, adopted by the Chinese people upon the organization of the Republic, will now be played on the organ by Dr. Bidwell. It is quite short but notable for its haunting beauty, while the words convey the hope of the Chinese people that the good neighborhood of their reborn nation will extend itself over the whole world.

Thereupon, the audience arose and stood during the playing of this anthem.

THE PRESIDENT: China, the oldest civilization extant and the largest community in the world, was old when Caesar conquered Gaul; old when Egypt and Greece were dying; old when Abraham left Ur of the Chaldees to found the Jewish family. China has always been isolated from the desire of conquest and wishful only to live her national life. And so she built her great wall, stretching twelve hundred miles across that fair land. But peace is not attainable by closing the door-in China or in our own country-and those who have joined themselves to the international bandits for world conquest are endeavoring at this very moment to destroy China and carry away her spoil. You will soon hear from an authoritative voice why Japan will never succeed in her criminal aggression.

The Ambassador from China to the United States was educated at two American universities, Cornell and Columbia, and is the author of several books in the English language. In this sense he is an honored American. The subject of his address is "China's Power of Resistance." We are happy to have him with us this evening, and I present him to you, Dr. Hu Shih.

Dr. Hu: I am very glad to be here tonight to celebrate Founder's Day in honor of Andrew Carnegie, who did so much for peace in the world. This beautiful Carnegie Institute has always devoted itself to the founder's ideals of a common brotherhood and the establishment of the peace and security of all men.

By the first week of November, Japan's war in China will be fifty-two months old. China has been fighting for four years and four months.

You will probably ask me how it is possible for China to fight on so long under such great handicaps against such a formidable foe. China's four years' fight against Japanese aggression has been called a modern miracle, and I shall devote my allotted time to an explanation of the factors which have made this miracle possible.

In brief, there are five main factors which have made up China's sustaining power:

- 1. Space
- 2. Number
- 3. Historical unity
- 4. Internal reconstruction
- 5. External aid

First—space. China has the rich inheritance of vast space to move about in. After ten years of intermittent war, and especially after four years of largescale hostilities, our enemy can barely claim to have occupied more than ten per cent of China's territory. Generalissimo Chiang Kai-shek has told the world that the principle of his strategy in the war against Japan is "to trade space for time." The spatial factor has been most important in China's ability to bog down the Japanese invader and gain four years' time. This factor of space was not fully understood until Hitler's blitzkrieg succeeded in conquering more than a dozen European countries in the brief space of a few months. Those countries in western and northern Europe and in the

Balkans have fallen one after another because, among other things, they were lacking sufficient space with which to trade for time. The recent success of Soviet Russia in so far withholding the onslaught of the German panzer divisions has furnished fresh proof that the most effective weapon against a blitzkrieg is time, and time can only be gained by means of vast space and large man power.

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The second factor is number, that is, vast population as actual and potential supply of man power. In all these four years, China has suffered great military reverses in the face of superior mechanized armies of the invader, but, because of our numerical superiority, the enemy has never been able to encircle or trap any large Chinese army. And we have been able to utilize the time gained in training more and more new divisions and new officers so that even the Japanese military High Command states that Generalissimo Chiang Kai-shek still has at least three million trained soldiers under his command. That is to say, even our enemy admits that the size of the Chinese army, not counting the vast guerilla forces, is greater today than it was four years ago when the war started. And we are confident that a nation of seventy million Japanese can never conquer a nation of four hundred fifty million.

The third factor is our historical national unity. It is not true, as you have been frequently told, that China has been unified by the Japanese invasion and by four years of war. Such a miracle cannot happen in so short a time. Let it be said once and for all that the Chinese national unity has been of twenty-one centuries' making. China was unified into an Empire about 200 B.C. During these last twenty-one centuries and a half, there have been short periods of separation and of foreign invasion. But broadly speaking, the Chinese people have been living continuously for over twenty-one centuries under one Empire, one government, one system of law, one written language, one form of education, and one historical culture. This continuity of unified national life has no parallel in the history of any race, nation, or continent, so that it is rarely fully appreciated by the foreign observer, who ften writes about Chinese disunity

during the first two decades of the Republic, and fails to grasp the fundamental feeling of national unity behind, and in spite of the internal political strife. It is this age-long sense of historical unity that is now holding the whole country together, inspiring the people to fight on most heroically for the deliverance of their country from the invader, comforting them in their adversity and misery and making it possible for millions of them patiently to bear great humiliation

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and agony in enemy-occupied territory, never despairing that final victory would be with their long-lived Fatherland.

The fourth factor in China's sustaining power has been a whole decade of internal reconstruction. As you will remember, Japanese war of aggression in China was actually started ten years ago, in September 1931, by her invasion in Manchuria. At that time, China was caught totally unprepared to fight an enemy who happened to be a first-rate military and naval power. Our leaders fully realized that as soon as a largescale war began, China would have to lose all the modern cities on the eastern and southeastern coast and possibly all along the lower half of the Yangtze River, and to face defenselessly a rigid blockade by the powerful navy of the enemy. Therefore, during those years of apparent appeasement, our leaders were not only drilling, training, equipping, and, as far as possible, modernizing our army units, but were also tak-

ing important steps in mapping out a long-term economic and industrial reconstruction in the vast hinterland of China's west and southwest in anticipation of the imminent war and naval blockade.

The first step in this direction was to build railroads and highways toward the west, northwest, and southwest. A great network of motor roads has been built up during these ten years, which includes the transcontinental highway to Russia and the famous



DR. HU SHIH

UNIVERSAL PRESS

Burma Road. Only recently, F. Tillman Durdin, of The New York Times, reported from Burma on the wonderful feat of the Burma Road. I quote a few sentences from his dispatch to give you a picture of China's achievement in the field of interior transportation. Burma Road," says Mr. Durdin, "has never been adequately described. Built almost entirely by hand labor, the road is a staggering achievement and without doubt the greatest highway construction feat of modern times. twists over seemingly impassable eightteen-thousand-foot mountains and finds its way through three-thousand-foot gorges. At places the road has been chiseled into the face of sheer mountainside, with thousands of feet of canyon below. The southern section runs through the worst malarial jungles

in the world."

Equally important was the step to establish modern industrial plants in the interior. Shortly before the outbreak of the war, the Government took the decisive step in dismantling more than four hundred factories and transporting their mechanical equipment to the interior, including the equipment of machine works, metallurgical plants, chemical works, cotton mills, flour mills, and paper factories. The total weight of the machinery thus transported with Government help amounted to over seventy thousand tons. In addition, blast furnaces, iron and steel furnaces, and other related materials necessary for the steel industry were also sent into the interior. In order to feed the planned industries in the interior, mining equipment, including hoisting, pumping, and other equipment, was transported from the great mines of Honan into the southwestern provinces in order that coal mines may be operated with more up-to-date equipment. The total weight of these materials from the mines and the furnaces thus transported was about fifty thousand tons. To supplement these transported plants, the Government also started a number of new factories including electrolytic copper plants, electrical apparatus factories, and machine works. This new equipment totaled over ten thousand tons in weight.

It took from one year to two years to transport, set up, and operate these factories in the hitherto unindustrialized interior. They are widely distributed in the vast interior in localities unknown even to myself and are now in full operation. It is these almost miraculously transported and transplanted factories which have been making arms for our defensive warfare, feeding the mechanical needs of our vast war machine, mining our old and new mines and producing chemicals, textiles, flour, and paper for the mili-

tary and civilian needs of Free China-These measures for building up a

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vast system of communication and transportation and for the industrialization of the interior provinces constitute the fourth factor of China's power of resistance—the reconstruction of the

great west.

The last, but not the least, factor is external assistance to China. It is no exaggeration to say that China has been able to fight on all these years because we have been able to receive important assistance from our friends abroad. Throughout these years we have been receiving aid in one form or another from Soviet Russia, Great Britain, the United States, and France before her collapse. This assistance has taken various forms—sometimes in the form of loans or commercial credits, sometimes in the form of military supplies purchased under barter, sometimes in the direction of maintaining our air routes and trade routes for our communication with the outside world and for transportation of our exports and imports, and sometimes in the form of economic embargo of important military and industrial supplies and materials against our enemy.

Of these four friendly powers aiding China, the United States has been most consistent and generous in her policy of giving assistance to countries resisting aggression. Even in those early days of isolation sentiment and neutrality legislation, the American Government took great pains in searching for ways and means to help China in her distress. The first American aid came in the form of purchasing Chinese silver, which gave my people the first source of foreign exchange with which to buy our war supplies in America. The second aid was the commercial credit of twenty-five million dollars given to China in December 1938-at a time when China had just lost Canton and Hankow and was probably at the lowest ebb in her national morale. Since that first loan, there have followed the twenty million dollar commercial credit of April 1940; the twentyfive million dollar commercial credit of September 1940, and the one hundred million dollar loan of December 1940. The total sum of American credits and loans to China since December 1938

amounts to \$170,000,000.

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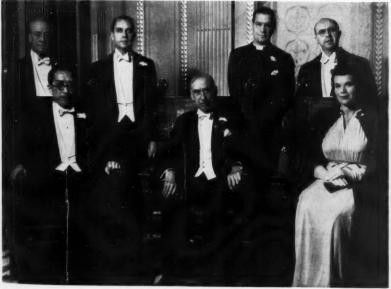
In addition to these forms of financial aid, the United States Government has taken other steps which have proven as effective as these loans in helping China and curbing her enemy. These steps include the various forms of limited embargo of essential war materials against Japan. A very important step was taken in March 1941, when Congress passed the Lease-Lend Act and appropriated seven billion dollars to carry out the national policy of giving material assistance to the countries resisting aggression. In one of his historic speeches, President Roosevelt said: "China shall have our help." During these several months, China

has been receiving important material assistance under the Lease-Lend Act. A special mission of military and technical experts under the leadership of Brigadier General John Magruder has gone to Chungking to take charge of the Lease-Lend materials at the China end.

Another and probably the most important step in this direction was undertaken by the American Government, in the last days of July, when Japanese assets in this country were ordered frozen, all aviation gasoline and motor fuel and all oil products from which these could be derived were placed under embargo, and Japanese commerce and shipping with this country were virtually entirely stopped.

This last economic pressure on Japan has been made more effective by the support and parallel action of the entire British Empire and the Nether-

lands East Indies.



FOUNDER'S DAY GROUP 1941

Seated, left to right: Dr. Hu Shih, Samuel Harden Church, Alice Long. Standing: William Frew, Frederick G. Blackburn, The Reverend Dr. Arthur B. Kinsolving 2nd, Marshall Bidwell.

This most effective economic weapon against Japanese aggression, which American public opinion had been advocating all these years, has now been in full operation for about six weeks. It is already beginning to show important effects on the national life and militaristic tempo of Japan. For Japan is a nation most vulnerable to this economic embargo. While she can manufacture most of her weapons of war, she is extremely lacking in the raw materials with which to manufacture these weapons. She is also lacking in oil and motor fuel. Seventyfive per cent of her oil has been coming from the United States. More than half of her imported iron ore and scrap iron and steel also came from America. From this country came also over eighty per cent of her imported raw cotton. As recently as 1939, fifty-seven per cent of her imported machines and machine tools came from the United States, the remaining forty-three per cent coming from Germany, Britain, and other countries.

An American embargo, supported by the British and the Dutch East Indies Governments, on all these vital materials, is therefore the most powerful weapon to curb the aggressive and de-

structive power of Japan.

I am quite confident that the American people, once fully realizing the wonderful efficacy of this economic weapon, will not lightly relax or abandon it until its enforcement has succeeded in driving home to the Japanese military and the Japanese people the plain lesson that aggression does not pay and war is suicide.

These, then, are the five factors which go to make up China's power of resistance. We still have the vast space. We still have the unlimited man power. Our historical sense of national unity has gone through a new baptism of fire and blood and has come out of it more solid and more unshakable than ever. Our internal economic and industrial reconstruction in the interior is showing more and better re-

sults every month: we are making more arms and producing more goods for export and home consumption. And, on top of all these, the whole international situation has turned more and more in our favor and against the enemy. The political isolation and moral ostracizing of Japan has long been completed by her own action. And the economic encirclement and strangling of Japan is now being completed—again by her own action.

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China has long left her Valley Forge and is now confidently marching on to her final victory at her Yorktown!

The Ambassador's address was received by the audience with appreciation and enthusiasm; and was followed by three songs by Miss Long: "O Sleep, Why Dost Thou Leave Me?" by Handel; "My Lady Lo-fu" by Warren; and "When I Love You" by Cole; and then for an encore, "The Last Rose of Summer."

THE PRESIDENT: On account of the war the Carnegie Institute has found it impossible to continue its International Exhibitions of Paintings. The nations that have participated in these shows, representing each year the best available art of the world for that year, cannot send their works here as they have so gladly done in past years, but their flags have been assembled on the platform tonight as an evidence of our faith that they themselves will come again to Pittsburgh when the final victory shall have restored their independence and their liberty. Instead of the International Exhibition, therefore, Homer Saint-Gaudens, Director of Fine Arts, and his capable Assistant Director John O'Connor Jr., who takes charge of these things while Mr. Saint-Gaudens is in military service, have tried an experiment, the fruits of which are very encouraging to our trustees. The plan chosen was simply this: that all American painters who had never exhibited their pictures heretofore in the Carnegie Institute were now invited to send their works here for the judgment of a jury chosen from the eminent painters in America, whose decision would be unquestionable as to knowledge and authority. Five thousand paintings were accordingly sent here—an astounding answer to this opportunity for new talent to receive its recognition. The jury has chosen 302 paintings from this enormous offering, as that number marked the limit of our wall space, and you are invited to a preview of these pictures, with full faith as to their merit, when you leave this hall. Before going, however, I would like to make this public statement of the award of prizes as made by the art jury

The first prize of \$1,000 was awarded to Tom Loftin Johnson, of Bedford, New York, for "American Pièta." (Mr. Johnson, who was on the platform, was presented to the audience, and upon arising, was accorded a

cordial welcome.)

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The second prize of \$700 was given to Harry Dix, of New York City, for "San Francisco Gothic."

The third prize of \$500 was awarded to Dean Fausett, of New York City, for

"The Green Mountains."

The honorable mentions were awarded as follows: the first, with prize of \$400, to Karl E. Fortess, of New York City, for "Winter Landscape"; the second, with prize of \$300, to Ruth Erb Hoffman, of Buffalo, New York, for "Intermezzo"; the third, with prize of \$200, to Adams W. Garrett, of Cambridge, Massachusetts, for 'Toll of the River'; and the fourth honorable mention, with prize of \$100, was awarded to Nathaniel Jules Jacobson, of Boston, Massachusetts, for The Bread of Affliction." (Mr. Jacobson, whose presence in the audience had been made known, was also called to the platform to receive the congratulations of those assembled in the hall.)

Then with the march tones of the organ, the audience made its way to the galleries, where the Founder's Day celebration came to a felicitous close.

DIVISION OF HUMANISTIC AND SOCIAL STUDIES

NEWLY organized Division of Humanistic and Social Studies has been created at the Carnegie Institute of Technology, with Willard E. Hotchkiss, Maurice Falk Professor of Social Relations, as its director. Chiefly administrative, the organization of the new division merges the social relations program, which Dr. Hotchkiss has headed, with the Division of General Studies. This centralizes the responsibility for the related types of studies, which have been offered in the College of Engineering chiefly under the social relations program, and in the Margaret Morrison Carnegie College and the College of Fine Arts under the Division of General Studies. A particular aim of the reorganization was to co-ordinate the teaching of these courses with adequate opportunity for scholarly research on the part of the instructors.

Dr. Hotchkiss, former president of the Armour Institute of Technology, has had a distinguished career as an educator and labor arbitrator. The organizer of the schools of business at Northwestern, Minnesota, and Stanford Universities, he came to Carnegie Tech in 1938 to accept the chair endowed by the Maurice and Laura Falk Foundation for the development of a social relations program in the College of Engineering. This program, substantially as inaugurated at the Carnegie Institute of Technology, was adopted last year for recommendation by the Society for the Promotion of Engineering Education. The Tech freshman and sophomore phases of the program, taking slightly less than one fourth of the student's time, are now in effect. The junior and senior phases are being introduced in the fall of 1941 and 1942.

The present organization does not alter the social relations plan nor the courses heretofore offered under the Division of General Studies, but achieves broader and more integrated

control.

AMERICA AND HER ARTISTS

A Review of Homer Saint-Gaudens' New Book, "The American Artist and His Times" (332 Pages, Dodd Mead and Company, \$5)

By Samuel Harden Church

HOMER SAINT-GAUDENS' book, "The American Artist and His Times,' has been the congenial companion of my leisure for the past week. In putting it aside now for humbler tasks, I feel that I have been dwelling in the upper stories of the Palace of Art, where men and women tread softly on velvet carpets, where music rises in enchanting melody, and where great pictures adorn the walls in the shimmering candlelight of a thousand prisms. For although the art that Mr. Saint-Gaudens discusses is wholly concerned with American works, and although the beginning of his absorbing story finds his primitive painters for the most part in their lowly colonial homes, art itself is now and ever has been like unto a dainty princess who transforms the current scene into an atmosphere of elegance and beauty, and is then attended by adoring men and women who win her smile or incur her frown, according as they bring to her the gifts that are delightfully real, or the crude objects that merely counterfeit the things that charm her senses.

It is a pleasure to say that Mr. Saint-Gaudens' book is not a catalogue of names, but a story of progressive achievements, which reflects the soul of the author and keeps the interest alive from the first page to the last. Homer Saint-Gaudens, the son of America's greatest sculptor, has lived his mature life amidst paintings, sculpture, and architecture; and the esthetic equipment thus gained has enabled him to discuss his subject without assuming the finality of a superior judgment, yet with the sound affirmations of a man who knows what he is talking about. And he carries the matter with an unfailing sense of humor which from time to time will crack the set face of any reader who opens the book thinking that a wholesome talk about art is a bore. to n

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Based on the thesis that art persistently reflects the society in which it operates, the book gives us almost a social history of the United States as well as an artistic one. The author's chronological divisions are always run off with a prologue of major social and economic events of the time, in partial explanation of the type of art expression in vogue during those years. So it was proper that Benjamin West and his followers should have painted about 1800 for a society that attached great importance to the academic and the classic. It was proper, too, that following them in an age of sugary sentimentalism should come a man like Thomas Sully. It was proper, too, that in matter-of-fact years realism should invade the art of painting to clip the wings of fancy. Also, during what Mr. Saint-Gaudens calls "The Industrial Surge," 1876-93, progress was largely material, and home talent was fostered by industrial affluence to such an extent that our country came to the verge of that period of the greatest volume of easel painting the world has ever known. For art must thrive with wealth and starve with poverty.

The author has set down certain historical divisions in his narrative of the representative and best-known artists of our country. In the first division are our earliest paintings—1670-1750—which are spoken of as "primitives." Here, also, are the limners, who achieved recognition because, according to our author, those who sat to them had risen a bit in life and desired

to make their golden successes obvious. One of the earliest of these authenticated pictures was of John Davenport of Connecticut, painted in 1670 by a sign painter. Gurdon Saltonstall, governor of Connecticut, was also painted by one of these nameless ones. And later than this, but still in this same period of beginnings, John Smibert and Robert

Feke developed an established recognition with large paintings of prominent families, known as conversation pieces.

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During the period from 1750-1828, which our author calls "Colonial Sophistication, the growth in art was by way of several great names, particularly Benamin West, Charles Willson Peale, Ralph Earle, and John Trumbull. The two really greatest artists of this period, however, were John Singleton Copley and Gilbert Stuart, whose works have stood for over one

hundred and fifty years as the height

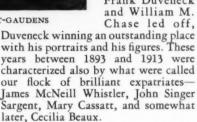
of American portraiture.

We find "Mixed Strains" in the period 1828-76, which brings in new painting ideas with the introduction of genre canvases, as well as the portraits by Samuel Morse, Thomas Sully, and Eliza Ridgely. John Vanderlyn, as much as anyone else, gave the first impulse to a new movement toward a truly native landscape school founded along the picturesque valley of the Hudson. Thomas Cole, George Caleb Bingham, and David G. Blythe are outstanding in the genre painters of this period.

By 1876, "the Industrial Surge," esthetic interests were properly be-wildered by the American millionaire "who splashed his wealth on his Newport mansions." Intimate landscape painters still flourished, and Thomas Hovenden gave us "Breaking Home Ties," which unquestionably heads the all-time list of popular pictures in the "saccharine"

manner.

In the period 1893-1913, which the author labels Between Two Fairs," American art was setting itself to reflect American life. Although Winslow Homer, Thomas Eakins, and Albert Ryder were unlike in spirit and technique, they were alike in their independence of European movements and in their conscious and genuine relation to the inspiration of American life. In the Munich school, Frank Duveneck Chase led off,



From the time that the author begins to discuss the "Armory Show" of 1913—in which former Parisian students called to the attention of Americans the ways of painting that existed across the seas—and when he brings in contemporary and present-day artists—1920-41—the familiar names come thick



HOMER SAINT-GAUDENS

and fast, with the academic works on one side and the advanced dreams on the other, fighting out their age-old battle throughout America. As always, Mr. Saint-Gaudens pleads for tolerance of the new waves of art that are spreading over us. It is a plain inference that he does not like some things that shock the man of sense, but he wants them shown so that people will study them. In his conclusion he states the case for art as a whole fairly and squarely, as

we feel, after reading this handsome and powerful volume, that he is competent to do.

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It is a grand book, worthy of the author and of his publisher. As a literary achievement it conveys a definite picture of its ever living subject. Mechanically it is everything that a publisher could produce—paper, type, pictures, appearance, and glorified dignity. Christmas could bring no happier remembrance.

THE SURVIVAL OF THE SNAILS

By Stanley Truman Brooks
Curator of Recent Invertebrates, Carnegie Museum



ONE of the hardest questions for the conchologist, or student of shells, to answer is, "What good are shells, anyway?" In troublous times like these, the public thinks of shells only as useful for war and

killing. But to the conchologist, the specimens he studies are not for war but for peace. They are the snail shells and mussel shells both of our land and our freshwater, and they teach the past geography of our globe; they tell of great ice ages and the formations of lakes, islands, and clay and gravel deposits.

The Carnegie Museum has been well known for its studies in molluscs, and through the years one of the nation's great collections has been built up in the Museum's laboratory of recent invertebrates.

The most important section of our collection is made up of the snails that inhabit land—the moist places in forest and field. In this labor the name of

George H. Clapp stands at the top of the list. Very early in the "shell game," a slightly ambiguous term alluding to our study of snails, Dr. Clapp began a study of the fauna of the Great Smoky Mountains in Tennessee and North Carolina. He and Herbert H. Smith, one of the former curators of this Museum, gathered together great numbers of the southern species. Many of these were given their first scientific names by Dr. Clapp. As the years progressed, the collection grew, and through the efforts of two other men associated with the Museum who were specialists in invertebrate forms, Arnold E. Ortmann and Victor Sterki, other lines of research upon the mussels of the southern waters brought even more specimens to the cases of the Museum. As the years flew by, the author found himself, under the direction of Dr. Clapp, studying the land snails of Pennsylvania.

Now a study of the land snails of Pennsylvania is fundamentally a study of the shells of all the northeastern United States, so the problem grew until the area under study spread from Labrador to the Gulf of Mexico. It was the logical development in following the pattern of natural distribution,

which includes two fundamental origins. First, we have the land snails either the same species or their ancestral forms—that came into North America from Asia and Europe by way of northern land bridges. Secondly, we have the familiar groups that migrated by the same route as did Mr. Opossum, by way of the mysterious reaches of Oceania-Australia and the Pacific All these Islands and Antarctica. entered North America and spread over the land in every direction that they could travel. When one realizes the slowness of migration of a snail, which in the adult stage is only about onetwenty-fifth of an inch in length, some comprehension of the time element may be gained. Some are still on the move, so the subject of distribution may well be said to be dynamic.

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But every element of nature seemed to conspire against these animals. The weather-the snows and ice that hampered the great beasts of primeval times—also hampered the life and pursuit of happiness of the smallest snails and their associates. One of the greatest cataclysms to descend upon them was the ice age. This was the classical ice age of Pleistocene times—that is, the geologic age next in order below our present one-and not the earlier ones. For that matter, some authorities claim that we are still in that age and that this recent period is but a stage between glaciations. But whichever way one wishes to view the debacles of nature, it is this later descent of the ice that had the greatest influence upon the snails and their colleagues. It spread havoc among them, and it is this havoc and the mollusk's ability to meet that catastrophe that brings more and more interest to our present studies. Perhaps if they could remember through their race the dissipation of the huge animals, the hairy mammoth and rhinoceros, the rise and fall of the great cats, and the development of the horse from its foxlike stature to the prize Percheron, they would emit a molluscan chuckle at their own genetic stability, for they, like the meek, literally inherited the earth.

We have mentioned above that when the snails came to this country they spread out in each direction in fanlike order in so far as their capacity would allow. But that is not all they did. They were and are dynamic entities and from their dynamism they have developed new forms and species in various regions and under various stimulations of nature. Therefore, in our studies there have been two phases: first, the study of the forms as they reacted to preserve themselves as the same species, and, secondly, their reactions to nature by which they have changed. This latter also may have been a reaction of preservation. Now Pennsylvania fits into this puzzle much the same as does Newfoundland and the Great Smoky Mountains. When the ice came those that had made their way south weathered the greatest spread of the ice and so lived to repopulate the stricken areas. During certain periods of the ice age, conditions were existent that enabled the snails to live in glacial islands," and they literally dug in" until the worst was over. These glacial islands have been found through our studies in Newfoundland and will perhaps be found farther south with more studies of Maine and the adjoining areas.

It is this pattern of what did happen that has engrossed the students of this laboratory, and it is the continuance of this study that has now led us to connect the snails of Newfoundland and New England with the collections of Dr. Clapp in Alabama and the Great Smokies. When we finish we shall have two great patterns overlapping and affecting each other: first, the pattern of life as it moved and developed in the South, and, second, the pattern of the hardy wayfarers that came from the North and which have surged again over the ice-marked vistas so immense in the minute existence of the snail.

Students of this and other institutions had co-operated in the collections



SCENIC BEAUTY IN THE SOUTHERN MOUNTAINS

from West Virginia, and from this transition habitat, faunistically speaking, many important discoveries had been made. New species were found, and many species formerly only collected in Alabama and South Carolina were found perched upon the Pennsylvanian doorstep. There still existed, however, all of southwestern Virginia and northeastern Tennessee, connecting the West Virginian region with the Great Smokies, that needed further study. With that goal in mind, the Brooks ménage set out during the summer of 1941, and within two days had established headquarters in the deep mountains of Virginia at the little town of Damascus.

Life in Damascus was the same life that one finds in all small towns. Here, however, it was more highly flavored with the hospitality of the South. Everyone spoke to everyone else, and the storekeeper greeted you with a friendship that was not put on purely for business reasons. Naturally, the major portion of the population did not believe that two grown-up people would really spend their time collect-

ing snails and deemed us some new sort of government agent. Our three children disarmed them, however, by their presence. We would never be in the forest for long until we would be accosted or accompanied by men or boys, all ostensibly hunting squirrels. This not only happened in Virginia, but also in the dewy atmosphere of Roan Mountain.

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Damascus, being in the center of the mountains, made an ideal headquarters, and of our forty-three days of travel, thirty-nine were spent in the depths of the hills. Snail collecting, like snail locomotion, is a very slow and painstaking process and very intimate with Mother Earth. I do not blame the mountaineer for his misgivings when he spied our five human creatures combing the hillsides with their small rakes and now and then pouncing upon some object with acquisitive glee. We were one with the other denizens of the forest in our burrowing, but this forest debris had been selected carefully for its content of small snails. Now hardly a day passes without bringing to light some hundreds of specimens as the findings are gone over in the laboratory. Side trips were made that covered Mount Mitchell, the research field of one of America's early naturalists, Elisha Mitchell; Grandfather Mountain; high and bleak Roan Mountain; and many of the wooded areas in be-White Top Mountain; and Mount Rogers, which has the tallest peak in Virginia; were literally at our back door, and there, in the darkness of the spruce trees, great snails were found feeding on the fungi among the needles. It was so very dark at this especial locality that they were only found by feeling, and the large shells, buried in the loam, seemed like so many toadstools just breaking through the earth. These were indeed a prize, and on the

outskirts of the spruce dungeon were

found the smaller ones. But a few yards

one way or the other and the collector

would be out of their vicinity and the

ground would be barren.

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The mountains flatten out and the forests pause where the fields of tobacco and corn bloom. Cattle in great numbers range the valleys and have made spiral paths in even terraces around the cleared hillsides. Sawmills are numerous and feed the veneer factories of the near-by towns. Only a few miles away one comes to Abingdon, a historic old town with homes that depict the culture and beauty of Virginia. In both Abingdon and Damascus, homes were found in which the CARNEGIE MAGAZINE held an important place on the reading table. But just over the next mountain one can be cut off from the world in the vastness of the forest and can taste the hospitality of the mountaineer himself.

So the days passed amid the summer heat. Many times, as we lay at night on our stuffy feather ticks, we thought of the freshness of the mountains above us. For a distance of over a hundred miles about us we had made collecting stations and had boxed our findings for the laboratory. One last effort was to plan the work for the coming summers, which would lead the future prospector

along the entire Appalachian Range to the heart of the Great Smokies at Newfound Gap. An enormous task was still to be achieved. Thousands upon thousands of square miles of forest and mountain have yet to be covered by systematic collections. The trail of the snails will make this a New Found Land. Not only will research efforts have to go into the unravelling of the story of the eons—which are the grand divisions of geologic time—but the students of geology and the allied sciences will also find that their efforts are necessary to complete the picture.

A RECORD DAY AT THE CARNEGIE INSTITUTE

N Saturday, October 4, 1941, the Department of Fine Arts of the Carnegie Institute had the highest record of attendance in drawing and painting classes in the history of the department. There were 986 children in the classes in the morning and 63 men and women in the adult sketching class that meets on Saturday afternoon.

It is thrilling indeed to realize that there are so many children in the city of Pittsburgh who, after their work in the Institute classes, will be so gifted in talent and appreciation of the world of beautiful things; and to know, too, that here are 63 adults who have such an intense interest in painting as a hobby that they will all come together on Saturday afternoons to learn the rudiments of this artistic work and to gain fresh interpretations with a brush and paint.

These groups carry out the basic idea of the Carnegie Institute, which is free to the people at all times for the enjoyment of the scientific and fine arts treasures and discoveries of the ages.

ENGLISH LIBERTY

We want no foreign examples to rekindle in us a flame of liberty; the example of our ancestors is abundantly sufficient to maintain the spirit of freedom in its full vigor.

-EDMUND BURKE



THE GARDEN OF GOLD



THE first man to enter the Garden of Gold this month was Mr. William L. Mellon, bringing in his hand a check for \$1,500, payable to the Carnegie Institute of Technology Endowment Fund. The Gardener, of course, took great delight in reminding Mr. Mellon that his generous gift immediately assumed a triple value, amounting to \$4,500, because of the arrangement whereby every gift of money receives two dollars for one from the Carnegie Corporation of New York, until, when we raise \$4,000,000 from our friends, the Corporation will give us \$8,000,000, making a total new fund for Carnegie Tech of \$12,000,000 by June 30, 1946; and furthermore, one third of our \$4,000,000 may be given in buildings on the campus. This whole enterprise is a challenge to every citizen of Pittsburgh, and the Gardener strives to impress upon each mind that any gift for this purpose is gratifying and welcome, whether it be one dollar or one million dollars, or any sum between.

Mr. Mellon's gift reflects the principle on which these frequent gifts constitute the Garden of Gold; for there is probably no financial arrangement in the world other than here where a person can make a gift of so many dollars with the firm assurance of three dollars sprouting where only one was planted. Meanwhile, the Carnegie Corporation of New York is accumulating its obligated fund of \$8,000,000 by an amortization of \$570,000 each year. They will have their \$8,000,000 in hand at the appointed date; and Pittsburgh is resolved that we shall stand ready at that time with our \$4,000,000.

One source of gratifying fruitage in the Garden of Gold has long been developing in the bequests to this fund from the wills that are made by our friends from time to time. One such gift has already been designated in the will of William F. Lloyd, with a growing value of more than \$500,000. In September a bequest from Charles Gulentz of \$100,000 was noted here, the income to provide scholarships for boy students at Carnegie Tech. The thought behind this new endowment was that Mr. Gulentz was helping substantially to educate the coming generations and inspire them to build a new world and keep it in ever living freshness and beauty by the trained hands and gifted minds that spring from Carnegie Tech's curriculum, under the direction of President Doherty, combining science with what is called a liberal education in arts and letters. Many other bequests to this golden fund have already been reported here.

And so, in that solemn but necessary moment when it comes to the making of a will, what nobler purpose can suggest the disposition of surplus wealth beyond this one of opening wider the gateway of knowledge and power with every such gift.

Let it not be forgotten, either, that the boys and girls who receive theireducation at Carnegie Tech never leave that institution with any forgetfulness of this living debt to their fostering mother. Until success crowns their work their means are limited; but every month we present their names through the available space of these pages. And here are some of those who, "with shining morning faces" and hearts full of high purpose, have for the moment turned aside from the duties of the day to come into the Garden of Gold with offerings that serve toward the building of this essential fund:

Mr. and Mrs. A. S. Andrews, Harry G. Appel, Agnes Bittaker, Owen C. Coho, Catherine Conti, W. B. Dryden, Leonard W. Himes, Lilian Krasik, George W. Lambertson, Joseph P. McCurdy, Allan H. Neal, Robert W.

Ortmiller, Ruth H. Reiss, Mary Lou Schlayer, Henry Seaman, William B. Simboli, and Richard H. Williams Jr. have contributed gifts to the Alumni Federation totalling \$106.

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And gifts making a total of \$171 came from the following alumni: Gotthard E. Anderson, Myron F. Barrett, Mr. and Mrs. Leo Kasehagen, Joseph C. Keaney, D. Y. Liversidge, C. A. Nimick, Helen M. Savard, Gerald H. Terrill, Mr. and Mrs. P. J. Unzicker, Mrs. Mary B. Warren, Wanda R. Warren, and Mr. and Mrs. W. A. Wills.

Gifts amounting to \$95 have come from these alumni: Edward S. Bucher, Andrew Carnegie, Mr. and Mrs. Francis Church, Edward W. Garbett, Arthur W. Gittins, A. Grodner, Susan Kyak, Dorothy LaGrange, Mrs. Ford C. Mohney, Warren D. Nupp, M. Lynn Patterson, Rebecca M. Pontius, and R. H. Smith.

The sum of \$1,108 has been sent in by the following: Charlotte E. Bailey, H. W. Hartman, Frank I. Lawson, Mary Ride Lees, James C. Orr, C. E. Powell, S. M. Siesel, and Theron Wasson.

There is also a total of \$188 from the Alumni Federation that has been given

for the 1946 Endowment Fund by Daryl R. Adams, Margaret Whitaker Allan, Walter Lee Campbell, E. F. Cary, Harold J. Clarke, John W. Ewalt, Clifford M. Foust, E. H. Grotefend, Eugene J. Gunshol, Bessie M. Hazen, Ruth C. Hespenheide, E. A. Lucas, R. F. Lunger, A. William McGuire, Nancy McKenna, H. L. Parker, Thomas J. Peiffer, Cora Pitcairn, Leonard W. Rusiewicz, H. S. Stockdale, and Mr. and Mrs. Karl B. Weber.

Adding these sums to those already contributed to the work of the Carnegie institutions and recorded here for the past fourteen and one half years brings the total of gifts to the following amounts: for the Carnegie Institute, \$1,315,422.95; for the Carnegie Library of Pittsburgh, \$40,629.12; and for the Carnegie Institute of Technology, \$230,745.68 for operation and equipment, and \$1,614,549.82 for its 1946 Endowment Fund, which will multiply under the two-for-one arrangement with the Carnegie Corporation of New York; making a grand total for the three institutions of \$3,201,347.57. There is still the sum of \$2,385,450.18 to be raised before the Carnegie Corporation agreement can be fulfilled.

THE GIANT PANDA

By Harold J. Clement Associate Preparator of Mammals, Carnegie Museum

A FEW months ago the first and only giant panda in the collection of the Carnegie Museum was placed on exhibition in Mammal Hall. This large and rare central Asian animal of striking coloration is the gift of Childs Frick, who acquired it from Quentin Roosevelt.

In 1869, when a French missionary named Père Armand David was traveling in western China, native accounts of supposed white bears found nearby came to his attention. Securing some specimens from native hunters, he sent the skins to Paris, where it was discovered that the new beast was not a bear at all but, instead, a relative of the small racoonlike panda of southern Asia.

Due to the rough country that must be crossed to reach the home of the giant panda—it inhabits only the most inaccessible mountains of central Asia and subsists solely on bamboo shoots only a few native-killed skins were formerly available to museums. These were just an aggravation to the scientists, who desired specimens complete with skeletons, measurements, and other data needed to classify the new animal. In 1928 an expedition was formed for the Field Museum of Chicago not only to collect the giant panda, but also to acquire the necessary information about it. Headed by Colonel Theodore Roosevelt, the expedition found that the panda is one of the most elusive of the large mammals of the globe and that much fruitless searching was necessary before they were rewarded. Finally, however, they returned to Chicago with the first scientifically prepared specimen of the giant panda, complete with skeleton and the much-desired data. Now there are a dozen or so specimens throughout the United States, of which the Carnegie Museum has this fine adult panda collected by Quentin Roosevelt on a somewhat more recent expedition to southern Asia.

In writing about the pandas, authors frequently mention their raids on the beehives of the native farmers as well as their subsistence on bamboo plants. They say, too, that the pandas and bears often inhabit the same country; the pandas remaining active during weather that sends the bears into hibernation. The pandas compare favorably with bears in other respects also-namely, in regard to size. Perhaps the name, giant, is misleading when applied to these pandas, for fullgrown black bears are only slightly larger than adult pandas, and it is probably only in comparison with their small long-tailed relatives that these animals can fairly be called giants.

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Fortunately, the Carnegie Museum's new panda is an adult, and its fur is in splendid condition. At the present time it is on exhibition among other single specimens of Asiatic mammals, but it is hoped that someday it can be placed in a habitat case that will resemble realistically its home in a bamboo forest.



THE GIANT PANDA

PRINT MAKING IN THE UNITED STATES

By VIRGINIA LEWIS

Instructor and Assistant in Charge of Exhibitions, Department of Fine Arts, University of Pittsburgh



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It is always pleasant to find the Carnegie Institute maintaining an interest in the field of prints. The Department of Fine Arts could not have chosen a more appropriate corollary to its annual exhibi-

tion of painting than the Survey of Contemporary Print Making in the United States, on the balcony of the Hall of Sculpture until December 14. It is indeed timely to stress democracy in art and there is no more democratic pictorial art than that of print making. Prints are an art of the people by virtue of their content and for the people by their virtue of multiplication to reach a wider public.

The exhibition was assembled by the American National Committee of Engraving, an organization which is to be highly commended for the enthusiasm and sustaining interest they are arousing in print making today. The work of many of our best-known print makers is shown here as well as that of new and younger artists of the black and white media. The combination gives a good indication of the forward directions the graphic arts are taking in seriousness of purpose, pleasure in artistic production, and progress in technical skill.

On the whole these prints are definitely American. They are about people, the places they know, and the things they do. Many of the problems which interest the modern American painter are also important to the print

maker. Indeed, in the case of prints, it is often the painter who has changed his medium to express more effectively and to a larger audience his esthetic experience. It does not necessarily follow, however, that the greatest print makers are first painters. Many print makers of the past and present—Piranesi, Meryon, de Martelly, Arms—have chosen to work chiefly in the subtle innuendoes of black and white.

In this exhibit the professional print makers and painters working in the graphic arts have treated their problems, which are an integral part of the life of America today, both impersonally and with an increasing interest in the people and scenes represented. Vital industry is shown in Harry Sternberg's "Steel Mills" and in Peter Helck's 'Fast Freight.'' Social maladjustments are reflected in the lithograph of Joe Jones, "A Poor Heritage,"
"Castles in Manayunk" by by Russell Weidner. Problems of a psychological interest are revealed in John de Martelly's splendid and forceful "Evangelist," and in Mabel Dwight's "Queer Fish," in which the fish seems almost to be lamenting the impending fate of the erstwhile aquarium. The loneliness of the little tailor in Will Barnett's aquatint, and of the "Pushcart Shopper" by Weissbuch, is unmistakable. A kind of amused resignation to grim reality is expressed in Hugh Bott's Hall Bedroom' and Reginald Marsh's "Merry-Go-Round." Some of these are sharp reprimands to society; others seem to be more in the nature of slight reproaches. A more chuckling sense of humor is introduced in John Sloan's amusing comment on a different group of people in "Connoisseurs of Prints, and Elizabeth Olds's "Hunting," and



JUNKED BY GRACE ALBEE (Wood Engraving)

Fred Becker's "At the Jazz Band Ball." Subjects like these could not have been done at any other time except in the twentieth century and have been treated with fresh and vital energy in tech-

nique and style.

Traditional subject matter has not been neglected. There are the usual number of street scenes and landscapes, from the charmingly photographic "Bend in the Road" by Samuel Chamberlain to Ernest Fiene's somewhat mannered "Connecticut Winter." A feeling of loneliness pervades many of these landscapes. This is achieved by the illusion of vast spaces exemplified in Andrew Butler's "Kansas," or by the use of one of the elements for the chief point of interest, as in "Spring Rains, Vermont," by Asa Cheffetz. This loneliness the artist must feel as one removed from the attitudes of the average person. Another such landscape is Adolf Dehn's "The Spanish Peaks." The meticulous architectural rendering of "In Memoriam" by John Taylor Arms is remarkable in portraying the effect of light on the grey stone of the cathedral. There are also reportorial accounts of places in such prints as "Standard Fisheries" by John Winkler, and "Pike's Slip" by Louis C. Rosenberg, strongly reminiscent of Whistler and Charles Meryon.

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A departure from the peculiarly American may be seen in some of the more nonrepresentational prints. Abstractions creep in here and there. The most outstanding is Benton Spruance's "Arrangement for Drums" which has

good design and rhythm. Surrealism has a small part in the show in Castellon's fine lithograph, "Of Land and



EVANGELIST BY JOHN DE MARTELLY (Lithograph)

Sea," and in Lamar Baker's "Fabric," depicting a futile cycle. Among the splendidly executed still lifes are Minnetta Good's "Dahlias," a pleasing naturalistic arrangement, and Paul Landacre's 'Growing Corn," stylized, yet with a botanist's interest in precision. In Cathal O'Toole's "Fiona," fanciful deep-sea life is reflected with Irish imagination through the channels of academicism.

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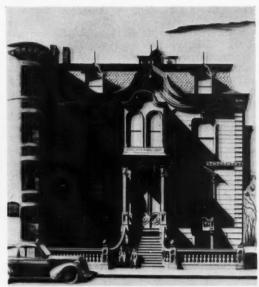
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In general, attention has been paid to the principles of good composition and to the effective use of pictorial devices, such as chiaroscuro. The pattern of dark branches silhouetted against only a slightly darker background of the darkness of night in Martin Lewis's "Hanted" is remarkable.

Edward Hopper makes use of chiaroscuro, or the contrast of light and dark, in a highly dramatic way in his "Night Shadows." A good balance of composition is achieved in Eugene Higgins's "Adrift" by the careful placing of lights and darks rather than by forms and masses. The horizontals of the landscape, together with the docks and barges in the foreground, make a pleasing pattern of lines in Louise Boyer's 'Snowdrift.' An effective pushing into the foreground of the old lady in de Martelly's "Evangelist" gives her importance. The cat slinking out the door, the plant by the chair, and the lighted cross above the chest, all are subordinated to the central theme. The strong diagonal and the contrast of light and dark combines to emphasize the dynamic quality of speed in Peter Helck's "Fast Freight." In "Vic-torian Mansions" by Lawrence Kupferman, the sharply defined bright light against the heavy darkness stresses the sadness of a period gone by.

The exhibition is of interest in the



VICTORIAN MANSIONS BY LAWRENCE KUPFERMAN (Drypoint)

great variety of techniques, from the early woodcut to the most recently developed silk-screen print. Technique is very important in one's appreciation of prints, for it is the wide range of the processes of print making that makes possible the large number of esthetic effects. These offer to the artist a great variety of solutions to his problem in the production of a work of art. It is important, too, to realize the limitations of each medium. Roi Partridge, in his "Santa Rosita," has used the medium of etching to achieve an effect that should result more naturally from an engraving process. The engraved line, by reason of the method used to produce it-a pushing ahead by hand into the metal—is formal, cold, rigidly complete. The etched line, on the other hand, is essentially sketchy, indicating rather than completing, flexible and friendly. The etching seems to be more appropriately used in Costigan's "Ida May," Paul Cadmus" "Mother and May," Paul Cadmus' "Mother and Child," or even the Meryon-like "Bracing Subway Excavation," by Ostrow-

sky.

A goodly number, in fact one third of the prints, are lithographs. This medium lends itself to the expression of modern problems and modern taste. It is at once sketchy and quick, direct and forceful. A greater number of effects can be attained by it than by any other print process. Adolf Dehn's "Spanish Peaks" is a masterpiece of this technique in the richness of tone and the lustrous quality of the sky. "Fast Freight," by Peter Helck, possesses a beautiful lithographic quality in the whirls of smoke coming from the train. Boardman Robinson, in his "Moon-light, Central City," succeeds in portraying subtle gradations of tones possible only in the most skilful handling of the lithograph. The quality of the rock surfaces in Stow Wengenroth's 'Sea Gulls' is another example of what can be done with this medium. Closely related to the lithograph, but producing a somewhat harsher effect, is the zincograph seen here in both black and white and in color.

Another tone process in evidence is the aquatint, originally perfected in the eighteenth century. Through its use a pleasing translucency has been obtained in Will Barnett's "Tailor." Combinations of techniques make for even more varied effects. For example, unusual surface texture, together with subtle underdrawings, has been achieved in Cathal O'Toole's "Fiona" by means of soft ground etching on line engraving.

Although not so great in number, there is as fine technical skill displayed in the wood engravings as in the more numerous lithographs. There is no better exponent of this art than Grace Albee, represented in the present exhibit with "Junked." She has used this medium gracefully and cleverly with a delightful feeling for the pattern of line. Each stroke has been executed to give a brilliant and exquisite crystal clearness. The silvery quality present has been enhanced by the smooth surface on which the artist was working.

Perhaps an even more ingenious use of the medium has been made by Fred Becker in "At the Jazz Band Ball."

The silk-screen print is a comparatively new medium which is taking its place along with the lithograph as a peculiarly twentieth-century expression. Harry Shokler's "Waiting for the Mail" seems to have taken on the character of a modern Currier and Ives, both in the use of color and in subject matter. The silk-screen print is especially suited for this kind of expression. Intense and brilliant color effects can be achieved by the process, as in Merwin Jules's print, where the combination of bright colors intensifies the earnestness of the conductor. Color in prints has often been a topic of much controversy and it has been argued that its use defeats the purpose of the print. But when it forms a definite part of the artist's design, as in Emil Ganso's "Coast of Maine," and as it does in the silk-screen prints of Elizabeth Olds, then certainly its use is justifiable.

The exhibition is comprehensive in its expression of American graphic art, ranging from the most conservative to the most radical, both in artistic form is

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and in American thought.

WINTER ACTIVITIES

RT activities for boys and girls at the Carnegie Institute, as well as the adult class in sketching, began in October, and in November the Museum activities also began. Each Saturday from November through March the various nature clubs will be meeting, and the moving pictures in the Lecture Hall on Saturday afternoons that are always so popular during the winter months will again be shown. Museum Lecture Series, illustrated in color and black and white, and given each year on Sunday afternoons for those interested in natural history, will start after the beginning of the new year and will be announced in the CARNEGIE MAGAZINE, with the entire schedule, at a later date.



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'THE PLAY'S THE THING"

Reviewing "The Two Orphans" by Adolphe Dennery and Eugène Cormon

By HAROLD GEOGHEGAN

Professor of the History of Art, Carnegie Institute of Technology



THE directors of Carnegie Tech's department of drama can never be accused of narrowness of range in their choice of plays. They have given us at one time or another examples of almost every kind, from ancient

Greek tragedies to modern expressionist drama; from the loftiest poetry to the bleakest prose; plays of social significance and plays of no significance at all; polite comedy and impolite farce.

Now, for our instruction and amusement, Mr. Boettcher has dug up an example of the good old melodrama that delighted the less sophisticated playgoers of the mid-nineteenth century. When I was young, there were theaters, such as the Adelphi and Drury Lane in London, the Porte Saint Martin in Paris, and the old Queen's Theater in Dublin, which were devoted exclusively to this type of entertainment. When you went to one of these, you knew what to expect—lots of surprises and sensational incidents, exaggerated appeals to all the most conventional sentiments, characters of the blackest villainy or the snowiest virtue. knowing playgoer affected to despise these productions, but the populace flocked. One hissed the villain with vigor and wept-good, wet, audible weeping, too, I have heard it—over the misfortunes of the heroine, and followed the unrolling of the plot with breathless interest.

Of these melodramas, one of the most popular was "The Two Orphans," by Adolphe Dennery and Eugène Cormon. Dennery, so the "Encyclopedia Britannica" informs us, was the author "alone or in collaboration, of some two hundred plays." What became of the other one hundred and ninety-nine, I know not, but "The Two Orphans" kept the stage in its native France, as well as in England and America, for more than twenty years, and as a moving picture was popular long after that.

It is clear that a play of such determined longevity must have had qualities that the other melodramas of the period lacked. No one would call it literature—it has no distinction of style, the characterization is of the baldest and most obvious kind, it has little wit. The old play is, however, an outstanding example of effective theatrical storytelling. The involved and complicated plot is handled with great skill, and the author's fertility in inventing fresh and ever-fresh tribulations for the Orphans is a thing to marvel at. It is an exciting romantic tale, excellently told in the terms of the theater. Viewed in the calm light of reason, it is, I suppose, largely nonsense, but it is entertaining nonsense.

On its first appearance in New York, no less a person than Henry James—and I can imagine no two men less likely to appreciate one another's work than the author of "The Golden Bowl" and the author of "The Two Orphans!"—found it "prodigiously clever," and doubted "whether for the time and money one spends, it would be possible to give one fuller measure, pressed down and running over, of surprising sensations

and bewilderments." Audiences felt that they were getting their money's worth, and I think they feel so still.

Henry Boettcher, who directed the present revival, had the good sense and the good taste to regard "The Two Orphans" as the serious play that the authors intended it to be; and to present it, as far as the limitations of the material at his disposal permitted, in the manner of the period in which it was written. The fashion of "spoofing" those old melodramas in the Hoboken manner, by deliberate overacting and by emphasizing their crudities, may be amusing for half an hour, but becomes tiresome when stretched out over a whole evening. It is true that there were a few cynical titters in the last scene, but, on the whole, the audience took it seriously, and appeared to enjoy it without the aid of beer and pretzels, or the factitious hissing of the villains and the applauding of the virtuous sentiments.

One of the difficulties that confronts a modern director of the old melodrama is the fact that actors trained in the broad and definitely theatrical style of acting necessary to make the performance of such plays really effective are practically nonexistent. That even an approximation of this style was achieved by student-actors—who were all much too young ever to have seen a play of this style—was evidence of careful and understanding direction.

Though the actors were only partially successful in recapturing the style of a bygone period, the designer of the settings, Lloyd Weninger, with his student assistants, scored a complete success. The 1874 audiences at the Porte Saint Martin did not like things left to their imaginations. No flights of steps and pylons, long grey draperies, and symbolic lighting for them! Henriette cries out with delight at the sight of Notre-Dame and the Pont-Neuf, the audience wanted to see them too, and so they did; all elegantly painted on the backdrop, with Notre-Dame thoughtfully situated on a hill for their clearer view. This type of literal scenery can be, and often is, disturbing and ridiculous, but when it is executed with taste and technical skill, as in this case, it has a great deal of old-fashioned charm. The scene inside the gates of the Salpétrière prison was really beauti-

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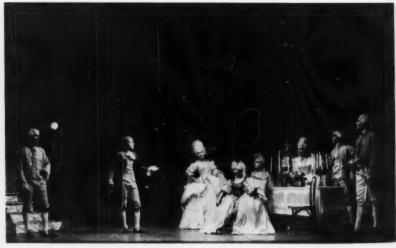
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STUDENT PLAYERS IN A SCENE FROM "THE TWO ORPHANS"



ANOTHER SCENE FROM THE FIRST ACT OF "THE TWO ORPHANS" SHOWING PARIS ON THE BACKDROP

ful. Painted scenery also takes a great weight off the shoulders of the property man, as candelabra, mirrors, ornaments, pictures, and so on, are frankly painted on the canvas. The audience snickered a little when the Chevalier de Vaudrey threatened to throw his valet out of a window which was quite obviously made of the same material as the walls that surrounded it; but for the most part the illusion held as well as any theatrical illusion need hold.

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I saw "The Two Orphans" at the beginning of its run and again on the last night. Of the two casts, the second seemed to me slightly the better. It had a much more sinister and terrifying Widow Frochard, and the comic relief in the person of the valet, Picard—a direct descendant of Molière's valetswas very skilfully handled. The blind and tearful Louise was touching in both casts, and so was the equally virtuous knife grinder Pierre. All of them must have required a stern repression of their sense of humor to say some of the lines which the authors put in their mouths. The two Countesses de Linières were handsome and aristocratic figures, and gave one the impression of believing in their rather incredible parts. Chevalier de Vaudrey and the Marquis de Presles looked dashing and handled their foils in a highly professional manner. In the first cast there was a good, truculent Jacques and a quite moving performance of the smaller part of Marianne. The first Picard, though less suave and probably less experienced than the second, gave an intelligent performance; and the Minister of Police seemed to have had more idea of melodramatic style than most of the others.

Mrs. Kimberley's Louis XVI costumes were very fine. The scene of the fête at the Château du Bel-Air, with its gay ladies in their immense panniers and towering powdered headdresses, got, and well deserved, a round of applause.

THE DEMAND FOR HONEST GOVERNMENT

The true strength of rulers and empires lies not in armies or emotions, but in the belief of men that they are inflexibly open and truthful and legal. As soon as a government departs from that standard it ceases to be anything more than "the gang in possession," and its days are numbered.

—H. G. Wells

THE ETERNAL LIFE OF HISTORY

In Books lies the soul of the whole Past Time; the articulate audible voice of the Past. . . All that Mankind has done, thought, gained, or been: it is lying as in magic preservation in the pages of Books.

-THOMAS CARLYLE



IS PEACE POSSIBLE?

It is probably true to say that there is not in all the world one righteous man or woman but would be rejoiced to make an honest peace amidst the growing frightfulness of this war. The reason why an honest peace cannot be made is that the war is being waged by an aggressor whose criminal ambition will not be appeased by any peace that requires the restitution of a dozen countries which have been seized and enslaved by him. Against this impasse of a longing passion for peace on one side, and a declared and unvielding purpose of world conquest on the other, there remains no alternative but to throw armies and navies into the surging conflict until exhaustion or surrender finds the world robbed once more of a generation of its manhood and a century of its wealth.

And this is because there is but one chief delinquent, and he will not yield—no, not by so much as an inch of his stolen territory. In nearly all the other wars of history enlightened and humane men have sought peace in midstream and assuaged their bitter contentions before the world was wiped clean of its possessions. Not so in this one. Secretary Hull says that no peace can be made on the terms of an international highwayman. And those terms are, Yield all or die!

What are we fighting for? Not for the maintenance of the British Empire, although that is something worth fighting for, in any age. Edmund Burke, in his great speech, "On Conciliation with America," made reference to a classic story of an aged man condemned to death by starvation, who was secretly fed from day to day by his "from the overflowing fuldaughter, ness of her own breast." That is what is going on now. The mother is being fed from the daughter's breast. The fall of the British Empire would mark the loss of all that has been done for the establishment of liberty throughout the world since men began to speak their minds, even before the Norman Conquest, in that first parliament which the Saxons called the witenagemore. England may not, perhaps, have come through all the centuries with clean hands, but neither has the United States. If the records of the two countries were to be set down in parallel columns there would be an amazing similarity between them-mostly for good, yet sometimes for bad. Yet no year has passed without mankind's receiving from one or the other of them some token of freedom which was undreamed of in the savage world of tyrants.

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But once again, it is certainly not for the preservation of England that America is preparing to take her part in this war. On the contrary, our nation is arming to the teeth in order to preserve this continent from conquest and subjugation by the German leader. Sincere and patriotic men are angrily declaring that Hitler cannot do

it, and that therefore we are safe; but hour by hour he is doing it now. His attack upon the tranquility and his disruption of the economic life of every nation on the globe have automatically established a state of war which beyond question is universal. There is no nation among them all that can pursue its existence in isolation from the others while Hitler flourishes. Let one of them attempt to do so-our own or any other-and it will instantly realize that its national life is bound up in the restrictions that Hitler's course has placed upon its economy, its finance, its exchange of goods, its travel abroad, its freedom from fear, its normal assurance of security. This is the situation that now binds all humanity as common victims of an unpardonable and atrocious assault that cannot be better described than by repeating Mr. Hull's charge that it is made by international highwaymen.

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And so, is peace possible? Some of us once thought that we were immovably isolationist—that we were strictly conforming our opinions to Washington's admonition against participation in foreign quarrels. The writer of these lines believed in that doctrine, and said so. America for the Americans—a nation compounded of all the races on earth, and dedicated to peace. Had we not fought to destroy war? Yet soon we were forced to hear the fatal trumpet sounding faintly in the far distance that the flames of war had again been lighted. Very well; we would have nothing to do with it.

But it was not long before the unheard-of infamies of Hitler's attack threw their ghastly shadow over this fair land, and halted the rapid progress of our civilization at every point. The world itself was suddenly shut against our free access to all the lawfully acquired rights of America beyond the seas. The intercourse of happy nations with each other, with all its obligations, was sternly prohibited. The great steamers that carried our citizens to new and delightful adventures abroad

were made fast at their docks and condemned to inactivity and decay. Millions of our workmen were thrown out of employment and compelled to suffer the pinch of an undeserved poverty. When our ships sought to enjoy the eternal freedom of the seas, they were sunk. And finally the stealthy tread of the German fifth column, indicating the certain approach of the aggressor, was making its footprints visible everywhere upon the Western Hemisphere.

Against these provocations we were slow to arm, as all the other chosen victims of the German conquest had been. Proud and mighty nations had fallen like tenpins before the assault of the irresistible foe. And then we found that, unescapably and by Hitler's aggressions, we had been drawn into the conflict.

Can an honest peace be achieved before we call our army and our navy into the battle? There is but one way to make the attempt. In the last war President Wilson appealed for peace to the German people against their rulers; and his plea was granted. There are today millions of Germans who would rejoice to expel Hitler and his staff from the military command, hand them over to punishment, and make a penitential peace. It would be very difficult for President Roosevelt to make such a plea heard in Germany, where listening to the radio is punishable with death. But there are other ways of reaching them; it is worth the trial, and none but he could make it.

Because there is no other way through which America can hope for peace except by the hard road of war. If that alternative must come let us prepare ourselves to embrace it. It will not then represent the conflict of two princely armies arrayed in modern knighthood, with high honor as the vindicated prize of victory. It will rather symbolize America in armor going forth to slay a dragon whose hot breath has devastated the earth—a dragon that is feared and hated by every human being in the world.

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